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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/653,678	09/02/2003	Michael John Keogh		4598

7590 06/22/2005
Michael John Keoga
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PINEHURST, NC 28374

EXAMINER

NGUYEN, CHAU N

ART UNIT PAPER NUMBER

2831

DATE MAILED: 06/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/653,678

Applicant(s)

KEOGH, MICHAEL JOHN

Examiner

Chau N. Nguyen

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 35-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 35, 42, 43, 46, 50 and 51 are rejected under 35 U.S.C. 102(b) as being anticipated by Caimi (6,339,189).

Caimi discloses a cable comprising a conductor core (1) and at least one layer surrounding the core (col. 4, lines 28-30) (re claim 42) comprising a dual layer non-halogen protective sheath (2,3) which consists of an intumescent solid, non-foamed polymer layer as means for providing thermal, fire, physical and mechanical protection, and an inner layer solid, non-foamed polymer layer as means for providing a second layer of fire protection thereby providing the cable construction with initial and long term protection against heat and combustion (re claims 35, 43). Caimi also discloses the outer layer being of a predetermined thickness of at least 1 mil (col. 10, lines 20-24) to provide sufficient thermal protection to the flame retarded inner layer (re claim 46). Noted that the cable of

Caimi can be used as a plenum, riser, building, or automotive cable since it comprises structure and material as claimed (re claims 50, 51).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 35, 36 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caimi in view of Dickinson (5,173,960).

Caimi discloses the invention substantially as claimed including the outer layer containing a polypropylene (col. 8, line 56) and having a predetermined thickness to provide sufficient thermal protection to the flame retarded inner layer. Caimi does not disclose the dual layer sheath surrounding a plurality of insulated wires. Dickinson discloses a cable comprising a sheath (Figs 4 and 5) surrounding a plurality of insulated wires. It would have been obvious to one skilled in the art to modify the cable of Caimi to have the dual layer sheath surrounding a plurality of insulated wires as taught by Dickinson for multiple transmission purposes.

5. Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caimi in view of Dickinson as applied to claim 35 above, and further in view of Fishler et al. (4,404,297).

Claims 37 and 38 additionally recite the intumescent material of the outer layer being a melamine phosphate in about 5 to about 100 parts by weight contained in 100 parts by weight of polypropylene. Fishler et al. discloses an intumescent fire retardant composition including inexpensive intumescent material which can be combined with polyolefin to obtain an outstanding fire retardant effect. It would have been obvious to one skilled in the art to include the intumescent material, melamine phosphate (col. 4, line 37), as taught by Fishler et al. in the outer layer of Caimi to improve the fire retardant properties in the cable.

6. Claims 40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caimi in view of Dickinson as applied to claim 35 above, and further in view of Keough et al. (5,698,323).

Keough et al. discloses a non-halogen sheath for cables, comprising a non-halogen extrudable composition of (A) a copolymer of ethylene and an unsaturated ester comonomer of a vinyl carboxylate wherein the carboxylate group has 2 to 5 carbon atoms, (B) the copolymer being, optionally, modified with an anhydride of

an unsaturated aliphatic diacid having 4 to 10 carbon atoms, (C) the copolymer having an ester content in the range of about 15 to 40% based on the weight of the copolymer and a melt index in the range of about 2 to about 25 grams per 10 minutes, and for each 100 parts by weight of component (A), about 100 to 250 parts by weight of magnesium hydroxide, coated or uncoated (see the abstract) (re claim 40) and the unsaturated ester comonomer being vinyl acetate (re claim 41). It would have been obvious to one skilled in the art to use the composition as taught by Keough et al. for the inner layer of Caimi since the composition of Keough et al. is not only a halogen-free composition but also has a reduced flame propagation.

7. Claims 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caimi in view of Fishler et al.

Claims 44 and 45 additionally recite the intumescent material of the outer layer being a melamine phosphate in about 5 to about 100 parts by weight contained in 100 parts by weight of polypropylene. Fishler et al. discloses an intumescent fire retardant composition including inexpensive intumescent material which can be combined with polyolefin to obtain an outstanding fire retardant effect. It would have been obvious to one skilled in the art to include the

intumescent material, melamine phosphate (col. 4, line 37), as taught by Fishler et al. in the outer layer of Caimi to improve the fire retardant properties in the cable.

8. Claims 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caimi in view of Kikuchi et al. (6,248,446).

Caimi discloses the invention substantially as claimed except for the inner layer comprising magnesium hydroxide in about 0.5 to 50 parts by weight contained in 100 parts by weight of polypropylene. Kikuchi et al. discloses a non-halogenated and flame-retarded wire comprising an inner layer including magnesium hydroxide. It would have been obvious to one skilled in the art to include magnesium hydroxide as taught by Kikuchi et al. in the inner layer of Caimi to improve the flame retardant of the cable. It would also have been obvious to one skilled in the art to choose a suitable amount of magnesium hydroxide in the modified inner layer of Caimi to meet the specific use of the resulting wire since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. In re Aller, 105 USPQ 233.

Response to Arguments

9. Applicant's arguments with respect to claims 35 and 43 have been considered but are moot in view of the new ground(s) of rejection.

Summary

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N. Nguyen whose telephone number is 571-272-1980. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chau N Nguyen
Primary Examiner
Art Unit 2831